This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A method for converting digital source data referring to source pixels in the raster of a first resolution into digital target data in the raster of a second resolution, comprising the steps of:

(a) scaling the digital source data by at least one scaling factor selected from a plurality of scaling factors including non-whole number scaling factors;

(b) allocating a target image matrix to each of the digital source datum on a basis of a surround window surrounding the source pixel and determining the digital target data from neighboring target image matrices such that each target pixel is directly formed from a source pixel taking the surroundings thereof into consideration,

(c) using each digital source datum for smoothing the target data to be determined from all neighboring source data,

and

(d) implementing scaling and smoothing such in a common processing step that

(d1) the target data are smoothed in the raster of the source data.

2. (Previously Presented) A method according to claim 1, further comprising the step of:

superimposing neighboring target image matrices on one another for determining the target data or are joined without overlap.

3. (Previously Presented) A method for converting digital source data in a raster of a first resolution into digital target data in a raster of a second resolution, comprising the steps of:

(a) scaling and smoothing the digital source data by a scaling factor selected from a plurality of scaling factors, said scaling factors including non-whole number scaling factors;

(b1) selecting a scaling rule from a plurality of selectable scaling rules,

(b2) selecting a smoothing rule from a plurality of smoothing rules,

(c) forming a single scaling and smoothing rule from the selected scaling rule and the selected smoothing rule, both a smoothing of the digital target data in the raster of the digital source data as well as a scaling ensuing in respectively one processing step with said single scaling and smoothing rule during formation of the target data,

(c1) allocating a target image matrix to each source datum on a basis of a surround window surrounding the digital source pixel and determining the digital target data from neighboring target image matrices such that each target pixel is directly formed from a source pixel taking the surroundings thereof into consideration,

(d) using each source datum for smoothing the target data to be determined from all neighboring source data.

Claims 4 and 5 (Canceled)

6. (Previously Presented) A method according to claim 3, wherein the selecting of the scaling rule ensues on a basis of a print job.

7. (Previously Presented) A method according to claim 6, further comprising the step of:

using different smoothing rules region-by-region within the print job.

8. (Previously Presented) A method according to claim 1, wherein the scaling factor has a fractional value.

Claim 9 (Canceled)

10. (Previously Presented) A method according to claim 1, wherein the scaling and smoothing steps include generating a respective index allocated to the target image matrix from the source data individually pixel-by-pixel, the target data being determined with said index.

11. (Previously Presented) A method according to claim 10, further comprising the step of:

using the index for addressing a look-up table that contains the target data.

12. (Previously Presented) A method according to claim 10, further comprising the step of:

using the index as an index signal for driving an electronic circuit that forms the target data from the index signals.

13. (Previously Presented) A method according to claim 10, further comprising the steps of:

storing the source data byte-by-byte in a shift register,

shifting an interrelated group of data in the shift register with each processing clock, as a result whereof the index is formed from bits of the shift register lying next to one another after the shifting of all data of the group.

14. (Previously Presented) A method according to claim 1, wherein the shift register is filled according to the following rules with every processing clock:

(a) R0 through R(A-1) remain unaffected and

(b) R(i+A) = q(i/Qy, Qy -1-(i%Qy)) and

R(i+A) = q(i/Qy, i%Qy),

whereby the following applies:

Ri: value of the ith register bit

Qx: window width in x-direction

Qy: window width in x-direction

q(k,l): value of the source pixel having the position (k, l)

/: integer division

%: modulo division and

A = Qy * (Qx - 1).

15. (Previously Presented) A method according to claim 1, wherein pixel data belonging to images are processed as the digital source data.

16. (Previously Presented) A method according to claim 1, further comprising the steps of:

processing excerpts of the image having l x m source pixels in common as a window;

forming target image matrices each respectively having n x p target pixels from each source pixel window; and

depositing the target pixels of neighboring target pixel matrices in a memory next to one another or overlapped.

17. (Previously Presented) A method according to claim 16, wherein neighboring target image matrices are overlapped with an OR-operation.

18. (Previously Presented) A method according to claim 17, wherein the source pixel windows each respectively comprise 3 x 3 pixels for scaling factors Sfx = Sfy = 2.5; and further comprising the steps of:

forming exactly one target image matrix having 3 x 3 target pixels from each source pixel window; and

forming exactly 5 x 5 target pixels from respectively four target image matrices by an OR-operation.

19. (Previously Presented) A method according to claim 1, further comprising the step of:

allocating a grayscale value to each source pixel.

20. (Previously Presented) A method according to claim 19, wherein at least one of a scaling and smoothing ensues in the grayscale value raster.

21. (Previously Presented) A method according to claim 1, further comprising the step of:

allocating a color value to each source pixel.

22. (Previously Presented) A method according to claim 19, wherein at least one of a scaling and smoothing ensues in the color value raster.

23. (Previously Presented) A method according to claim 3, wherein the selecting of the smoothing rule ensues on a basis of a print job.

24. (Previously Presented) A method for converting digital source data referring to source pixels in a raster of a first resolution into digital target data in a raster of a second resolution via scaling by at least one scaling factor according to a scaling rule and smoothing according to a smoothing rule, comprising the steps of:

(a) using each source datum to smooth all neighboring source data;

(b) allocating a target image matrix to each source datum on a basis of a surround window surrounding the source pixel; and

(c) determining target data from neighboring target image matrices, such that target data are smoothed in a raster of the source data, and scaling and smoothing ensues in a single and common step, wherein said scaling includes scaling by a scaling factor selected from a plurality of scaling factors, said plurality of scaling factors including whole number and non-whole number scaling factors.

25. (Currently Amended) A method for converting digital source data in a raster of a first resolution into digital target data in a raster of a second resolution via scaling by at least one scaling factor according to a scaling rule and smoothing according to a smoothing rule, comprising the steps of:

(a) prescribing a scaling rule for scaling the data by at least a scaling factor selected from a plurality of scaling factors including non-

whole number scaling factors from a plurality of selectable scaling rules;

(b) prescribing a smoothing rule for smoothing the source data from a plurality of selectable smoothing rules;

(c) combining the scaling rule and the smoothing rule into a single scaling and smoothing rule, such that

(c1) each source datum can be employed for smoothing all neighboring source data,

(c2) a target image matrix is associated with each source datum individually pixel-by-pixel using a surrounding window surrounding the source pixel, and

(c3) the target data are determined from neighboring target image matrices, such that the target data are smoothed in the raster of the source data and the scaling ensues in a single and mutual step.